Joint Legislative Audit
and Review Commission

Impact Assessment
for the 'ILOVEYOU'
Computer Virus
June 12, 2000

AUDITOR OF

PUBLIC

ACCOUNTS

COMMONWEALTH OF VIRGINIA

Overview of the Virus

- Initiated May 3, 2000

- U.S. Public and Private Agencies begin issuing alerts and advisories early on May 4, 2000

- By May 8, 2000 reports indicated 500,000 sites had been impacted globally

- Spread rapidly because it
    - ✓ Began during business hours
    - ✓ Sent itself to everyone on the recipient's e-mail list

Overview of the Virus

- Both a 'virus' and a 'worm'

- Introduced as an e-mail message with a visual basic script (*.vbs) attachment

- When opened, ILOVEYOU
  - ✓**Sent itself to everyone on the recipients' e-mail list**
  - ✓**Infected Internet Relay Chat program**
  - ✓**Attempted to overwrite picture, video, and music files**
  - ✓**Attempted to install a password stealing program**

Assessment Methodology

- Initial Assessment Questionnaire distributed by Century Date Change Initiative (CDCI) on May 5, 2000

- Final Assessment Questionnaire distributed by CDCI on May 22, 2000

- Responses completed by May 31, 2000

- 103 agencies were surveyed

- 100 agencies responded either to the 1st, 2nd, or both questionnaires

Assessment Methodology

Information was requested concerning . . .

- ✓ **Affected hardware.**

- ✓ **Infected hardware.**

- ✓ **Recovery man-hours.**

- ✓ **Lost productivity man-hours.**

- ✓ **Hardware, software, and man-hour costs.**

The Impact

- 57 out of 100 agencies reported their hardware had been infected

- 14 out of 100 agencies had their hardware affected, but not infected

Hardware Affected/Infected

Out of . . .

- 2,744 Servers

- 116,862 PC's

There were . . .

- 113 servers infected.
- 279 servers affected.

- 1,793 PC's infected.
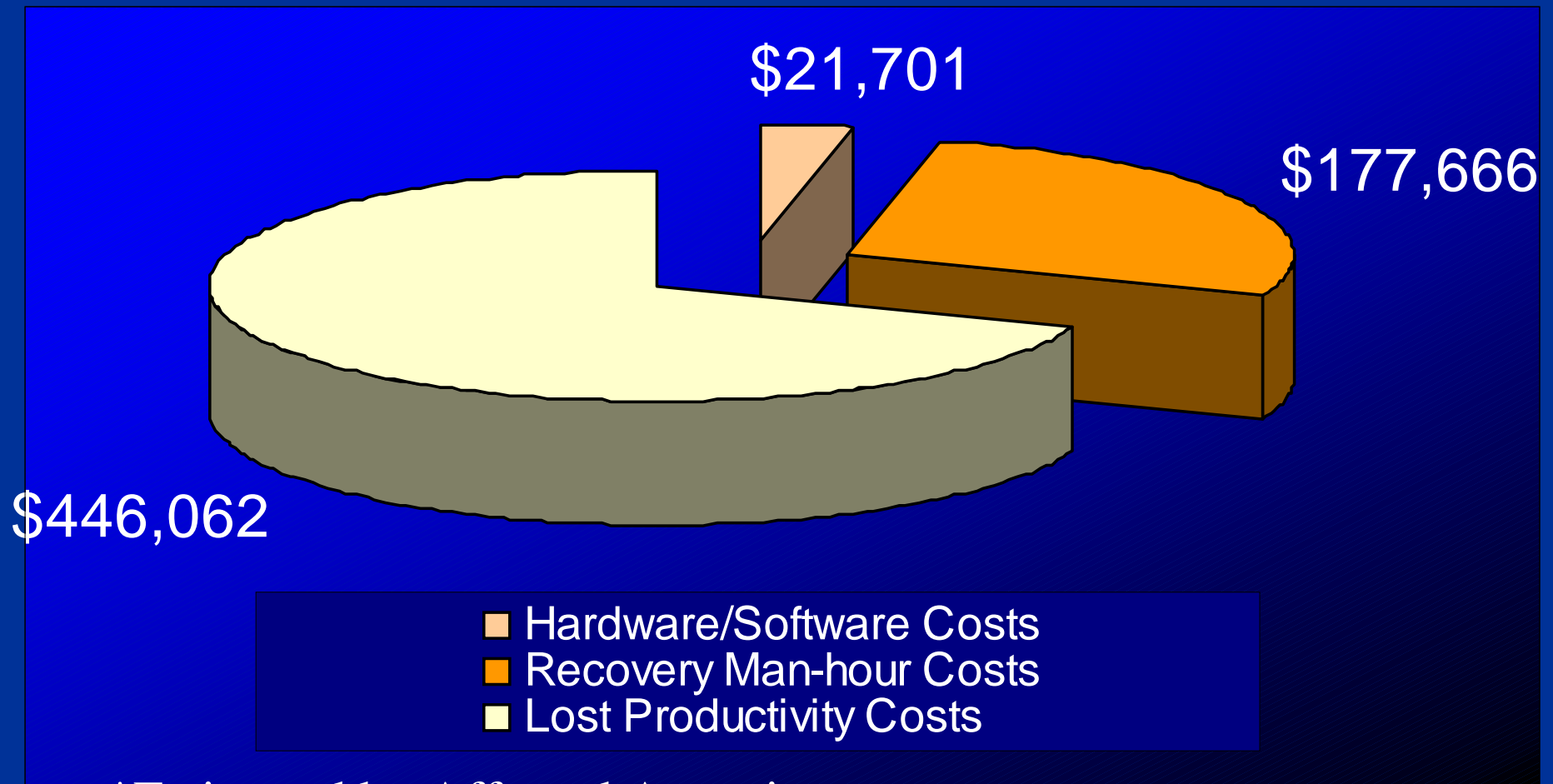- 13,685 PC's affected.

How It Was Fixed

- Updated virus scanning/detection software

- Modified virus detection software and firewalls to reject all e-mail attachments with *.vbs extensions

- Removed infected files from hard drives

- Restored corrupted files from nightly back-up

- In a few instances, reinstalled operating system and applications

The Hours Spent

5,656

15,055

Lost Productivity
For Recovery

The Dollars Spent*

$21,701

$177,666

$446,062

Legend:
- Hardware/Software Costs
- Recovery Man-hour Costs
- Lost Productivity Costs

*Estimated by Affected Agencies